

## Short Communication

### A Significant Range Extension for the Monotypic Tamijioideae (Zingiberaceae)

SHOKO SAKAI<sup>1\*</sup> and HIDETOSHI NAGAMASU<sup>2</sup>

<sup>1</sup>Institute of Biological Sciences, University of Tsukuba, Tsukuba, Ibaraki 305-8572, Japan; <sup>2</sup>The Kyoto University Museum, Kyoto University, Sakyo, Kyoto 606-8501, Japan

A range extension for *Tamijia flagellaris* is reported from the upper Tatau River in Bintulu District, Sarawak, Malaysia. A brief description of the fruit, which was unknown prior to this report, is also given.

Key words: Borneo, distribution, fruit, *Tamijia*, Zingiberaceae

The monotypic genus *Tamijia* S. Sakai & Nagam. (Zingiberaceae) has a peculiar combination of characters, such as partial fusion of the well-developed lateral staminodes to the labellum, unilocular ovary with parietal pracentation, and the perpendicular orientation of the plane of the distichy of the shoots with respect to the direction of growth of the rhizome (Sakai & Nagamasu 2000). A recent study using molecular data (Kress *et al.* 2002) showed that the genus is the most basal lineage in the Zingiberaceae, except for the African genus *Siphonochilus*, and placed it in the monotypic subfamily Tamijioideae W. J. Kress.

In a previous study (Sakai & Nagamasu 2000), the distribution of *Tamijia flagellaris* was reported to be restricted to the Lambir Hills in Sarawak and Belait in Brunei (Fig. 1). Here, we report a range extension for the species based on specimens in the herbarium of Kyoto University (KYO), which were overlooked during the previous examination. The collections are particularly important consid-

ering the original distribution of the basal lineage and evolution and diversification of the family. After discovery of the specimens, we unsuccessfully looked for additional specimens at other herbaria (AAU, C, E and K).

The specimens at KYO were collected in dipterocarp forests along Sungai Sinonok and Sungai Minah, which are branches of the Tatau River (Hotta 1965). The specimens have flagellate inflorescences with aristate, distichous bracts bearing flowers arranged in a cincinnus, which characterize the species (Fig. 2). The bracts (13–20 mm) and aristae (1.5–4 mm) of the two specimens are shorter than those in the Lambir plants (bracts: 30–40 mm, aristae 7–11 mm), but may be due to their immaturity and the short inflorescences (12–25 cm) of the Minah plants.

One of the specimens has a fruit, which was unknown prior to this report (*M. Hotta 14193*; Fig. 3). It is an ellipsoid capsule, 12 mm long by 7 mm wide and is surmounted by the calyx base. The sur-

\* Author for correspondence: E-mail: shoko@biol.tsukuba.ac.jp

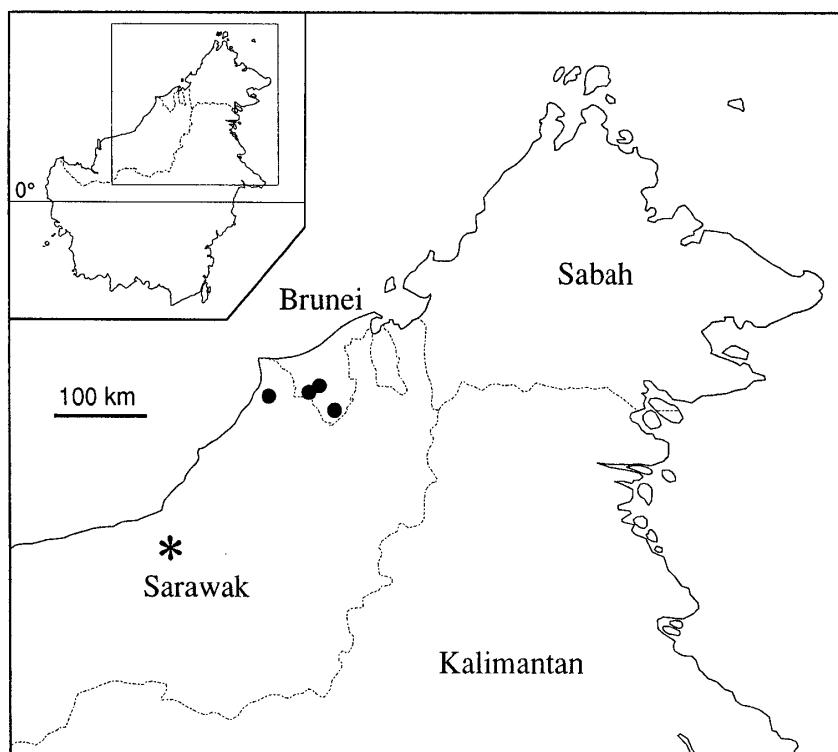


FIG. 1. Distribution of *Tamijia flagellaris*. Solid circle: collections from Lambir Hills (Sarawak) and Belait (Brunei); asterisk: Minah, new locality in Sarawak.

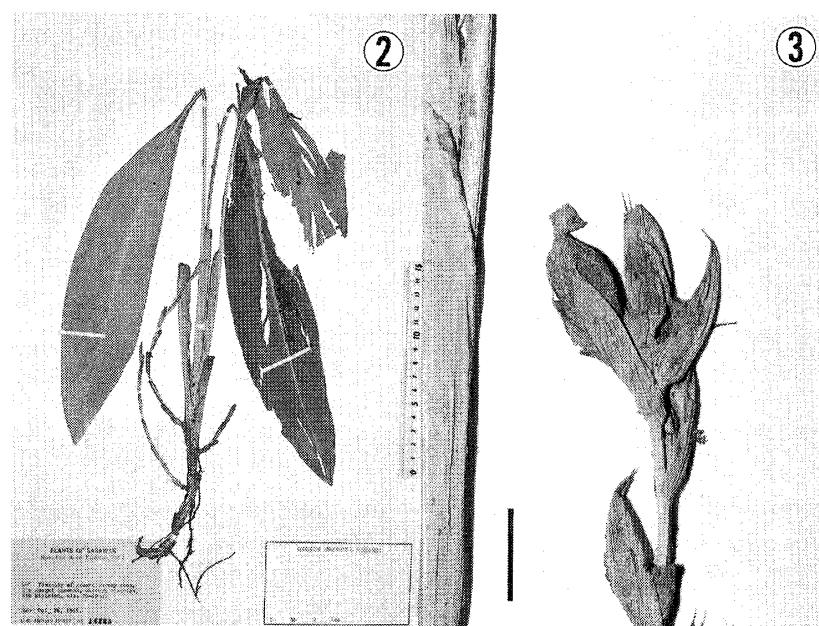


FIG. 2. Collection from Minah (*M. Hotta* 14223).

FIG. 3. Fruit on *M. Hotta* 14193. Scale = 1 cm.

June 2003

SAKAI & NAGAMASU: Distribution record of *Tamijia*

83

face is glabrous, although the ovaries soon after flowering are shortly pubescent in the Lambir plants. We were unable to examine the ovaries in the Minah collections.

*Specimens examined from Minah:* Bintulu Dist., Ulu Sungai Minah, En route from Sungai Mah to Sg. Shinonok (survey route), 24 Oct. 1963, *M. Hotta* 14193 (KYO); Sarawak, 4th Division, Bintulu Dist., Ulu Sungai Sinonok, Vicinity of Second Survey Camp, alt. 20–60 m, 26 Oct. 1963, *M. Hotta* 14223 (KYO).

This study was partly supported by a grant from the Japanese Ministry of Culture, Sports, Science and

Technology (14540643).

## References

Hotta, M. 1965. Itinerary of the Borneo (notes on the vegetation). *Acta Phytotax. Geobot.* 21: 153–160. (in Japanese).

Kress, W. J., L. M. Prince & K. J. Williams. 2002. The phylogeny and a new classification of the gingers (Zingiberaceae): evidence from molecular data. *Amer. J. Bot.* 89: 1682–1696.

Sakai, S. & H. Nagamasu. 2000. Systematic studies of Bornean Zingiberaceae: III. *Tamijia*: a new genus. *Edinburgh J. Bot.* 57: 245–255.

Received January 7, 2003; accepted January 18, 2003